

PATENT
S/N 10/665,100

Docket No.: 1232-5157

REMARKS

Applicants respectfully request reconsideration of this application in view of the foregoing amendments and following remarks.

Claim Status

After entry of the foregoing amendments, claims 24, 26-28, 31, 33-37 are pending in this application, of which claims 24 and 31 are independent in form.

Claims 25, 29, 30, and 32 are canceled herein without prejudice or disclaimer.

Claims 24, 28, 31, 35 and 36 are amended herein. No new matter has been added by these amendments.

Claim Rejections – 35 U.S.C. § 102

Claims 24-26, 29, and 30 are rejected under 35 U.S.C. § 102(b) allegedly as being anticipated by Kikuchi, U.S. Patent Publication No. 2002/004266A1 (“Kikuchi”). Applicants respectfully disagree with the characterization of the claims and prior art in the stated rejection and respectfully traverse this rejection.

The position finding method according to amended independent claim 24 has a distinct processing step of processing image data with a plurality of signal processing methods to find a position of a mark with respect to each of first combinations combining each of the sample regions with any one of the signal processing methods, a finding step of finding the expression for converting a designed position of the mark to the found position of the mark by using a method of least squares with respect to each of second combinations of the sample regions and the signal processing methods, a calculation step of calculating sum of squares of differences between the converted position and the found position over the sample regions with respect to each of the second combinations, and a selection step of selecting the expression corresponding to one of the second combinations which minimizes the sum of squares, so as to find the positions of the plurality of regions on the object.

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In contrast, Kikuchi merely discloses a determination step (step 266 of FIG. 4) that determines whether or not an overlay-error difference between lots is large, based on overlay-error information measured by an overlay measurement unit 102 and stored in a central information server 130. An exposure process (step 268) is performed when the difference is large, and an exposure process (step 270) is performed when the difference is not large. According to Kikuchi's invention, the exposure process of step 268 or 270 is selected between lots and is based on the overlay-error information stored in the central information server 120. Kikuchi fails to teach or suggest selecting one of combinations of sample regions or signal processing methods using such combinations (see FIG. 11).

Applicants respectfully submit that the present invention as claimed is neither taught nor suggested by, and therefore is neither anticipated nor rendered obvious in view of, Kikuchi. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of claims under 35 U.S.C. § 102(b).

Claim Rejections - 35 U.S.C. § 103

Claims 27 and 31-37 are rejected under 35 U.S.C. § 103(a) allegedly as being unpatentable over Kikuchi as applied to claim 24 above and further in view of Nishi, U.S. Patent No. 4,962,318 ("Nishi"). Applicants respectfully disagree with the characterization of the claims and prior art in the stated rejection and respectfully traverses this rejection.

Nishi fails to cure the above-stated deficiencies of Kikuchi. Applicants respectfully submit that the present invention as claimed is neither taught nor suggested by, and therefore is neither anticipated nor rendered obvious in view of, Kikuchi or Nishi, alone or in combination. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of claims under 35 U.S.C. § 103(a).

Dependent Claims

Applicants have not independently addressed the rejections of the dependent claims. Applicants submit that, in view of the amendments to the claims presented herein

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and, for at least similar reasons as to why the independent claims from which the dependent claims depend are believed allowable as discussed *supra*, the dependent claims are also allowable. Applicants however, reserve the right to address any individual rejections of the dependent claims should such be necessary or appropriate.

Information Disclosure Statement

Applicant concurrently files herewith an Information Disclosure Statement ("IDS"). This IDS is being filed to make of record in this case, references cited in co-pending US patent application 10/664,998. Applicant respectfully requests consideration of the references cited on the accompanying PTO 1449 and that the Examiner indicate such consideration by initialing and returning a copy of the PTO-1449 to Applicant.

CONCLUSION

In view of the foregoing, Applicants submit that the claims as herein presented are allowable over the prior art of record and that the rejections and objections, being overcome or otherwise rendered moot, be withdrawn. Applicants further submit that the application is hereby placed in condition for allowance which action is respectfully requested. If any outstanding issues remain, however, the Examiner is invited to contact the undersigned at the telephone number below.

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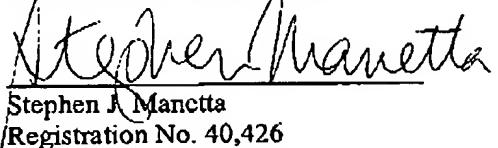
No fees are believed due in connection with this response and this paper is believed to be timely filed. However, should an extension of time be necessary to render this filing timely, such extension is hereby petitioned. The Commissioner is authorized to charge any fees or credit any overpayments which may be required for this paper to Deposit Account Number 13-4500, Order No. 1232-5157. An early and favorable examination on the merits is respectfully requested.

Respectfully submitted,

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